# Cisco UCS C200 M1 High-Density Rack-Mount Server

## High-Density Server with Balanced Compute Performance and I/O Flexibility

At-A-Glance

### High Density for Production-Level Applications

The Cisco® UCS C200 M1 High-Density Rack-Mount Server is a high-density, two-socket, one-rack-unit (1RU) rack-mount server designed to balance simplicity, performance, and density (Figure 1). Powered with up to two quad-core Intel® Xeon® 5500 series processors, the server is built to support production-level network infrastructure, web services, and mainstream data center, branch-office, and remote-office applications. Its compact size makes it useful for service providers offering dedicated or multi-tenant hosting.

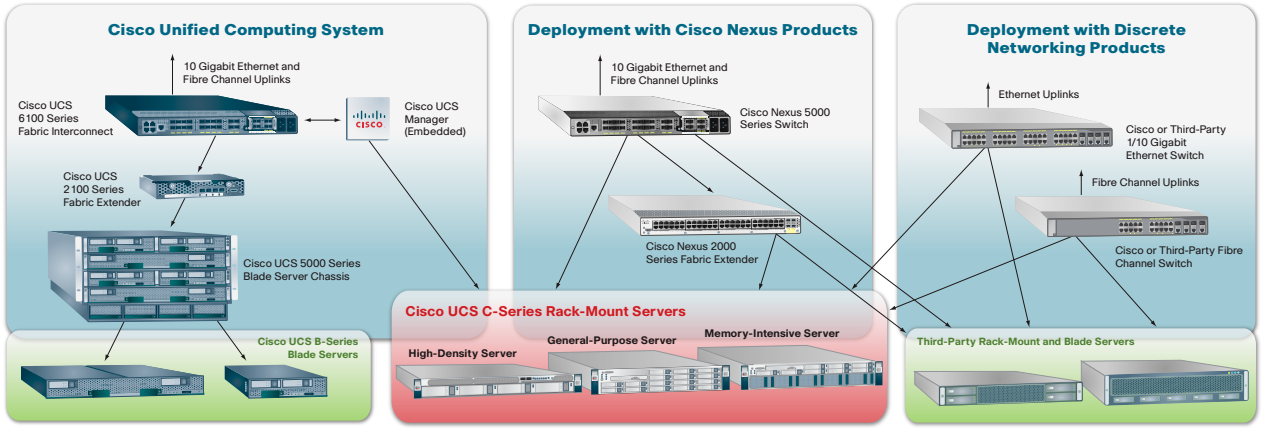
Figure 1. Cisco UCS C200 M1 Server

Energy efficiency is even more important for high-density, 1RU servers because of the number of processors that can be packed into a rack. Both the CPUs and power supplies contribute to the excellent energy efficiency of the Cisco UCS C200 M1 server. The server's Intel Xeon 5500 series processors feature Intel Intelligent Power Technology that automatically adjusts processor energy consumption to match workload requirements. With a greater number of automated low-power states, processor cores can go to near-zero power consumption independently. Further, the Cisco UCS C200 M1 server is equipped with a single or a redundant pair of power supplies that meet Climate Smart specifications, increasing efficiency. Both these factors help enable increased server density in today's data centers.

### Unique Benefits in a Familiar Package

The Cisco UCS C200 M1 server extends Cisco's product portfolio to meet the needs of customers that choose to deploy rack-mount servers. The server enables organizations to deploy systems incrementally—using as many or as few servers as needed—on a schedule that best meets the organization's timing and budget.

Figure 2. Cisco UCS C-Series Rack-Mount Servers Are Designed to Operate in a Wide Range of Data Center Environments, Including Those Using the Cisco Unified Computing System, Cisco Nexus™ Family Products, and Discrete Ethernet and Fibre Channel Switches from Cisco and Third Parties


Cisco Unified Computing System
10 Gigabit Ethernet and Fibre Channel Uplinks
Cisco UCS 6100 Series Fabric Interconnect
Cisco UCS Manager (Embedded)
Cisco UCS 2100 Series Fabric Extender
Cisco UCS 5000 Series Blade Server Chassis
Cisco UCS B-Series Blade Servers
Deployment with Cisco Nexus Products
10 Gigabit Ethernet and Fibre Channel Uplinks
Cisco Nexus 5000 Series Switch
Cisco Nexus 2000 Series Fabric Extender
Deployment with Discrete Networking Products
Ethernet Uplinks
Cisco or Third-Party 1/10 Gigabit Ethernet Switch
Fibre Channel Uplinks
Cisco or Third-Party Fibre Channel Switch
Cisco UCS C-Series Rack-Mount Servers
High-Density Server
General-Purpose Server
Memory-Intensive Server
Third-Party Rack-Mount and Blade Servers

Designed to operate both in standalone environments and as part of the Cisco Unified Computing System™* (Figure 2), the server combines flexible disk storage and I/O configurations with Cisco innovations, including a unified network fabric and network-aware Cisco VN-Link technology.

The server brings differentiation and value to what has been a commodity market with products not optimized to meet the needs of virtualized data centers. Available from Cisco and its data center network infrastructure (DCNI) partners, the server advances the rack-mount server market with the following features:

- **Flexible I/O and storage options:** With two PCI Express (PCIe) expansion slots, the server offers I/O flexibility and bandwidth, including the ability to integrate with traditional Gigabit Ethernet LANs and Fibre Channel SANs. The server hosts up to four internal SAS or SATA drives, providing internal storage capacity exceeding what is available in a corresponding blade form-factor server.
- **10 Gigabit unified network fabric:** When equipped with converged network adapters (CNAs) or the Cisco UCS P81E Virtual Interface Card*, the server integrates with a low-latency, lossless 10-Gbps Ethernet and industry-standard Fibre Channel over Ethernet (FCoE) fabric. This technology enables a "wire-once" deployment model in which changing I/O configurations no longer means installing adapters and recabling racks and switches.
- **Virtualization optimization:** Cisco VN-Link technology, I/O virtualization, and Intel Xeon 5500 series processor features extend the network directly to virtual machines. This optimization enables a consistent and scalable operational model, helping increase security and efficiency while reducing complexity.
- **Unified management*:** When integrated as a part of the Cisco Unified Computing System, management is uniquely integrated into all components of the system, enabling the entire solution to be managed as a single entity through Cisco UCS Manager, improving operational efficiency and flexibility.

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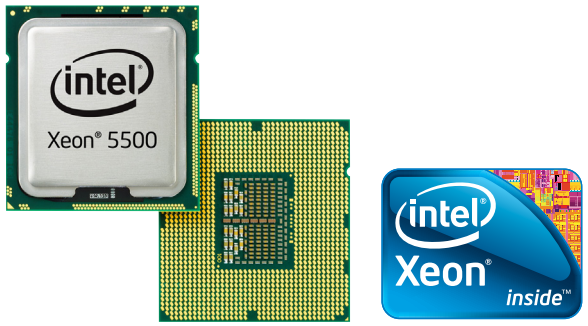
- **Service profiles*:** When integrated as part of the Cisco Unified Computing System, Cisco UCS Manager implements role- and policy-based management using service profiles and templates. Service profiles help automate provisioning and increase business agility, allowing data center managers to provision applications in minutes instead of days.

### Features of the Cisco UCS C200 M1 Server

- Up to two quad-core Intel Xeon 5500 series processors (Figure 3); these multicore processors automatically and intelligently adjust server performance according to application needs, increasing performance when needed and achieving substantial energy savings when not
- Up to 96 GB of industry-standard DDR3 main memory (using 12 8-GB DIMMs)
- Up to four internal SAS or SATA drives for up to a total of 4 terabytes (TB)
- RAID 0 and 1 support for up to four SATA drives using the built-in RAID controller; RAID 0 and 1 support for up to four SAS or SATA drives with the optional LSI 1064 Controller-Based Mezzanine Card; and RAID 0, 1, 5, 6, and 10 support through an optional LSI MegaRAID SAS 8708EM2 PCIe RAID Controller that features 256 MB of write cache and battery backup.
- Support for up to one low-profile, half-length, and one full-height, half-length x8 PCIe card; the full-height slot uses an x16 connector
- Two integrated Gigabit Ethernet ports and one 10/100-Mbps Ethernet management port for accessing the Cisco UCS Integrated Management Controller
- Front-panel CD/DVD drive, locator LED, and interface with video, two USB, and serial port connections
- Back-panel video, two USB, and serial port connectors
- Increased reliability, availability, and serviceability through optional dual-redundant power supplies

Figure 3. Intel Xeon 5500 Series Processor




### Flexible I/O Options

One of the benefits of rack-mount servers is the capability to configure a range of I/O options to meet specific workload requirements. The Cisco UCS C200 M1 server offers a range of flexible I/O options through its two PCIe expansion slots. Cisco supports adapters through arrangements with original equipment manufacturers (OEMs).

- **The Cisco UCS P81E Virtual Interface Card*** delivers the full power of the Cisco Unified Computing System by providing up to 128 Ethernet or Fibre Channel virtual interfaces that are programmed on demand to meet the needs of virtualized and nonvirtualized environments alike. The dual-port card interfaces with a 10-Gbps unified fabric.
- **CNAs from Emulex and QLogic** present both Ethernet network interface cards (NICs) and Fibre Channel host bus adapters (HBAs) to the host operating system, consolidating traffic over a 10-Gbps unified fabric.
- **Discrete I/O adapters** further enhance customer flexibility and choice with Gigabit Ethernet, 10 Gigabit Ethernet, and 4-Gbps Fibre Channel interfaces from industry-leading vendors including Broadcom, Emulex, and QLogic.

### Cisco Unified Computing Services

Using a unified view of data center resources, Cisco and our industry-leading partners deliver services that accelerate your transition to a Cisco UCS C-Series Rack-Mount Server solution. Cisco Unified Computing Services help you quickly deploy the servers, optimize ongoing operations to better meet your business needs, and migrate to Cisco's unified computing architecture.

For more information, visit Unified Computing Services.

### Why Cisco?

The Cisco Unified Computing System continues Cisco's long history of innovation in delivering integrated systems for improved business results based on industry standards and using the network as the platform. Recent examples include IP telephony, LAN switching, unified communications, and unified I/O. Cisco began the unified computing phase of our Data Center 3.0 strategy several years ago by assembling an experienced team from the computing and virtualization industries to augment our own networking and storage access expertise. As a result, Cisco delivered foundational technologies, including the Cisco Nexus™ Family, supporting unified fabric and server virtualization. The Cisco Unified Computing System completes this phase, delivering innovation in architecture, technology, partnerships, and services. Cisco is well positioned to deliver this innovation by taking a systems approach to computing that unifies network intelligence and scalability with innovative application-specific integrated circuits (ASICs), integrated management, and standard computing components.

### For More Information

Please visit: http://www.cisco.com/go/unifiedcomputing.

* Future capability planned to follow the product's first customer shipment (FCS).

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